

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO.

FOR
NEWMONT USA LIMITED
DREW TUNNEL DISCHARGE
NEVADA COUNTY

This Order is issued to Newmont USA Limited (hereafter Discharger or Newmont) based on provisions of California Water Code Section 13304, which authorizes the Regional Water Quality Control Board, Central Valley Region (hereafter Regional Water Board) to issue a Cleanup and Abatement Order, and California Water Code Section 13267, which authorizes the Regional Water Board to require preparation and submittal of technical and monitoring reports.

The Executive Officer of the Regional Water Board finds with respect to the Discharger's acts, or failure to act, the following:

1. The Drew Tunnel is part of the mine workings at the historic Massachusetts Hill Mine in the town of Grass Valley. Water drains from the mine workings and flows south through the Drew Tunnel. Approximately 450,000 gallons per day (gpd) discharges at the opening (or portal) at the south end of the Drew Tunnel. The water discharged from the Drew Tunnel contains pollutants associated with the breakdown or oxidation of minerals, including arsenic, aluminum, copper, iron, manganese, and sulfate. The portal is on property owned by the City of Grass Valley. Since 2000, the City has conveyed drainage from the Drew Tunnel to its wastewater treatment plant (WWTP) prior to discharge into Wolf Creek.
2. The Discharger through various predecessor companies formerly owned and operated numerous underground gold mines in the Grass Valley area. Newmont previously owned the mine and the property where the Drew Tunnel is located. The Discharger still owns the mineral rights, at varying depths, where the Drew Tunnel and associated mine workings are located. The Drew Tunnel and these mine workings cause or permit, or threaten to cause or permit, pollutants to enter waters of the state and create or threaten to create a condition of degradation, pollution, or nuisance.
3. Newmont is properly named a Discharger in this Order because it is either a past, successor, and/or present owner of the underground mine workings and it owns the mineral rights where the Drew Tunnel and associated mine workings are located and where waste is discharged to waters of the state.
4. This Order requires the Discharger to examine two aspects of the Drew Tunnel discharge in order to cleanup and abate the effects of the waste discharge:

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- a. First, the Discharger is required to identify and assess the sources of the water and pollutants in the Drew Tunnel discharge. While the nature of the discharge from the tunnel is known, the sources of water and pollutants contributing to the discharge remain uncertain. This Order also requires the Discharger to investigate and assess source control methods to reduce the quantity of pollutants discharged to waters of the state.
- b. Second, the Discharger is required to determine how to treat and/or dispose of any remaining pollutants discharged from the Drew Tunnel in compliance with applicable laws, regulations, and policies. The Discharger must ensure that the appropriate permits for such discharges cover any remaining discharge once source control measures are implemented.

BACKGROUND

5. Grass Valley is a historic gold mining town dating back to 1850. Gold was extracted from underground mines in the Grass Valley area for more than 100 years. Gold mining declined in the 1950s and eventually the hard-rock mines were closed, leaving behind environmental issues associated with abandoned mines, including water quality impacts from mine discharges, tailings, and other wastes.
6. The City of Grass Valley owns and operates a wastewater collection, treatment, and disposal system that provides sewerage service to the 12,100 residents of Grass Valley. The WWTP is located on land formerly owned by Newmont. The Drew Tunnel portal is located on property owned by the City. Drainage from the Drew Tunnel is currently conveyed to the City's WWTP for storage and treatment prior to discharge into Wolf Creek. The WWTP is designed for an average dry weather flow rate of 2.78 million gallons per day.
7. The 29-acre WWTP site is within a narrow stream valley with hillsides to the east and west (as shown on Attachment A, which is attached hereto and made part of this Order by reference). The Drew Tunnel portal is located between the City's WWTP to the east and Allison Ranch Road to the west. The elevation of the Drew Tunnel outfall is estimated at approximately 2,330 feet. The elevation of the top of the hillside to the west is approximately 2,500 feet.
8. The discharge point for the combined flow of the WWTP and Drew Tunnel are located on Assessor's Parcel Number (APN) 29-290-26 in T15N, R3E, MDB&M as shown on Attachment A. A map showing the location of Wolf Creek and other site features is shown on Attachment B, which is attached hereto and made part of this Order by reference.
9. In 2000, the City constructed a new pond at its WWTP. During construction, water from a mine tunnel was observed discharging onto the City's property and into Wolf Creek. Testing conducted in April 2000 revealed that water discharged from the mine

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tunnel contained aluminum, arsenic, copper, iron, manganese, and mercury above applicable water quality standards. In addition, the discharge water had a pH of 5.8.

10. In May of 2000, the City began to abate the discharge from the mine tunnel when it implemented controls to divert the tunnel drainage into the City's WWTP on an interim basis. After discussions with the Regional Water Board, the City also submitted a Report of Waste Discharge for the mine tunnel discharge. The mine tunnel discharges approximately 450,000 gpd to the WWTP.
11. A review of historical documents conducted by the City in January 2002 revealed that the mine tunnel on its property is the Drew Tunnel. The Drew Tunnel originates at the Watt Incline Shaft of the Massachusetts Hill Mine and serves as the main drain for the mine.
12. The Massachusetts Hill Mine was discovered in 1850 and worked with few interruptions until 1866. During this period, the mine yielded about \$3,000,000 in gold. The Massachusetts Hill Mine was acquired by the North Star Mines Company on 26 August 1894, and produced \$1,078,075 from 1894 to 1901, when the mine was closed.
13. A deed recorded on 12 June 1929 transferred the title of the Massachusetts Hill Mine to Empire Star Mines Company Limited, a Newmont company. By this document, the Massachusetts Hill Mine was consolidated with other mines and is subsequently referred to as the North Star Mine.
14. A deed from Empire Star Mines Company Limited to Newmont Mining Corporation conveying the North Star Mine and other mines dated 6 May 1957 was recorded 21 May 1957. A deed from Newmont Mining Corporation to New Verde Mines Company conveying the North Star Mine and other mines dated 6 May 1957 was recorded 21 May 1957. New Verde Mines Company dissolved in 1963 and its assets transferred to Newmont Exploration Limited. In 1998, Newmont Exploration Limited conveyed the subject mines to Newmont North America LLC. By a certificate dated 29 October 1998, and recorded 9 February 1999, Newmont North America LLC changed its name to New Verde Mines LLC. In its 2005 10-K filings with the Security and Exchange Commission, Newmont lists New Verde Mines LLC as a subsidiary of Newmont Mining Corporation. Through a series of mergers, corporate reorganizations, and name changes, Newmont USA Ltd., a Delaware corporation, assumed the liabilities of Newmont Mining Corporation.
15. Since the late 1950s, most of the surface title to Newmont's land holdings in Grass Valley has been sold off to various individuals and corporations, but New Verde Mines LLC, a subsidiary of Newmont, retains certain mineral rights in the area, including mineral rights at the Massachusetts Hill Mine and the Drew Tunnel.

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DREW TUNNEL INVESTIGATIONS

16. Investigations of the Drew Tunnel have been conducted by Newmont and the City of Grass Valley since February 2000 to characterize the discharge and evaluate remediation alternatives. Characterization of the Drew Tunnel discharge revealed concentrations of metals in excess of water quality standards. The analytical laboratory results have indicated that the drainage contains concentrations of iron as high as 9,850 µg/l (during turbid, high-flow conditions), manganese as high as 1,400 µg/l (during normal flow), and sulfate as high as 73 mg/l (normal flow). The sulfate concentration and the pH (less than 6.0 standard units) indicate acid mine drainage conditions. In addition, during the occasions when the drainage is turbid following high stormwater flow events, the iron concentrations increase in the drainage and result in a brownish-orange discoloration of the drainage and contribute to discoloration of Wolf Creek.
17. Water quality samples of the Drew Tunnel discharge were first taken by the Regional Water Board during a site inspection in February 2000. The samples were field tested on-site for pH and specific conductance. The pH results were 6.3 standard pH units for the Drew Tunnel discharge and 7.3 standard pH units for Wolf Creek. The specific conductance results were 180 µmhos/cm for the Drew Tunnel discharge and 170 µmhos/cm for Wolf Creek. The samples were tested for general minerals, total cyanide, arsenic, and mercury. Results of samples taken during the inspection, when the Drew Tunnel drainage was running clear with little turbidity and was colorless, suggested no problems. However, some laboratory detection levels were high compared to water quality criteria and firm conclusions could not be reached for all of the constituents.
18. In March 2000, the California Sportfishing Protection Alliance (CSPA) gave notice of its intent to pursue a citizen suit against the City of Grass Valley under the Clean Water Act for the Drew Tunnel discharge. The City responded by routing the discharge from the Drew Tunnel into its WWTP.
19. Between April 2000 and January 2001, the City conducted seven sampling events of the Drew Tunnel discharge. Results of the 7 April 2000 sample revealed that during normal discharge, the arsenic value exceeded the Human Health and Welfare Protection limitation for cancer and the iron value exceeded the Secondary MCL for the Drinking Water Standards. When high flow conditions caused increased turbidity in the water, the discolored Drew Tunnel discharge results revealed that the pH was just below 6.0 with a high iron value and a moderately high sulfate value.
20. Newmont and the City entered into a "joint investigation agreement" to conduct evaluations to identify the source of the Drew Tunnel discharge and identify alternatives to abate the discharge.

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21. In July 2001, Montgomery-Watson-Harza (MWH), the technical consultant retained by Newmont and the City, issued its *Grass Valley Mine Adit Technical Memorandum* that presented the results of the feasibility study of alternatives for controlling the mine tunnel discharge. The alternatives evaluated included plugging the tunnel, active treatment of the discharge, and passive treatment of the discharge. In October 2002, MHW submitted recommendations for additional steps to be taken to plug the tunnel. None of the evaluated alternatives were implemented.
22. In September 2003, a report was prepared for Newmont titled *Initial Evaluation of Treatment Options for the Mine Adit Discharge at the City of Grass Valley Wastewater Treatment Plant*. This report presented a summary of treatment options for the discharge from the Drew Tunnel at the City's WWTP.
23. In October of 2003, a report was prepared for Newmont titled *Work Plan for Design of a Treatment System at the City of Grass Valley Wastewater Treatment Works*. This report presented the key elements of work necessary to design a water treatment plant for managing Drew Tunnel discharge at the City's WWTP.
24. In January 2004, the City of Grass Valley filed a lawsuit in Federal Court to compel Newmont to remove the Drew Tunnel discharge from the WWTP. Alternatives identified in the lawsuit include plugging the tunnel and/or Newmont's treatment of metals in the Drew Tunnel discharge as a separate discharge that is not commingled with the City's waste stream.
25. In February 2004, a report was prepared for Newmont titled *TAS Draft Sample Plan for the City of Grass Valley Wastewater Treatment Works*. This plan presented the key elements of groundwater monitoring for characterization of Drew Tunnel discharge and seepage water at the City's WWTP.
26. In April 2004, a report was prepared for the City of Grass Valley titled *Pollution Prevention Plan, City of Grass Valley WWTP, Grass Valley, California*. This report estimated the contribution of aluminum, iron, and manganese from the Drew Tunnel discharge to the City's WWTP.
27. In November 2004, a report was prepared for an attorney representing the City of Grass Valley titled *Design Investigation Work Plan, Drew Tunnel Plug, Grass Valley, California*. This work plan presented a preliminary design to control discharge from the Drew Tunnel. The proposed design included the installation of a monolithic concrete plug 18 feet long located approximately 75 feet from the Drew Tunnel outlet.
28. On 27 January 2005, Newmont initiated flow and water quality monitoring of the Drew Tunnel discharge pursuant to a joint investigation agreement with the City. The objectives of the monitoring program were to characterize the water quality and flow of the Drew Tunnel discharge over a one-year period.

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29. In August 2005 and December 2005, a consultant prepared and submitted reports on behalf of Newmont. These reports, each titled *Drew Tunnel Drainage Monitoring Data Transmittal Report*, present monitoring data collected from 27 January through 30 September 2005. Water quality parameters were relatively constant during the period except for the sample collected on 23 March 2005. An increase in the total concentrations of aluminum, arsenic, copper, iron and mercury was observed for the 23 March 2005 sample, which was collected during the high flow period immediately following the peak flow that occurred on 22-23 March. The report showed total metals concentrations increase when total suspended solids increase during higher flows associated with storm events.
30. In October 2005, a report titled *Bench-Scale Treatability Test Results of the Drew Portal Water, City of Grass Valley, Wastewater Treatment Plant Property* was submitted on behalf of Newmont. The bench-scale treatability tests were conducted to determine the effectiveness of potential treatment alternatives for the portal discharge. The primary focus of the bench-scale treatability testing was for iron and manganese and secondly for aluminum and copper. In addition, the treatability tests provided data for pilot-scale testing and development of a full-scale design.
31. In April 2006, a report titled *Pilot-Scale Treatability Test Results of the Drew Portal Water, City of Grass Valley, Wastewater Treatment Plant Property* was submitted on behalf of Newmont. The pilot-scale treatability tests determined the effectiveness of the treatment technologies of the Drew Tunnel water under dynamic (i.e., non-static) conditions. The primary focus of the pilot-scale treatability testing was to determine the effectiveness of various treatment technologies for removal of aluminum, iron, copper, zinc, and other constituents. In addition, the treatability tests provided data needed for a conceptual design for a water treatment plant.
32. In summary, two alternatives have been identified in the investigations and reports listed in the above findings. The alternatives are plugging the tunnel and/or treatment and removal of pollutants from the tunnel discharge. Final implementation of the cleanup and abatement alternatives required by this Order may include some combination of these options plus source control in the mine workings. Treatment might be by the Discharger or by the Discharger in combination with a third party.

WATER QUALITY INFORMATION

33. Waste Discharge Requirements (WDRs) Order No. R5-2003-0089 (NPDES Permit No. CA0079898)(NPDES Permit) was issued to the City for the discharge from the WWTP to Wolf Creek. The NPDES permit contains effluent limitations for aluminum, iron, and manganese and other constituents. Based upon operational capabilities, the City is not able to consistently comply with the aluminum, iron and manganese effluent limitations. The City's WWTP is currently operating under Cease and Desist Order No. R5-2003-0090, which requires the City to stop discharging contrary to the effluent limitations in WDRs Order No. R5-2003-0089 by 1 March 2008.

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34. Various investigators have estimated the amount of aluminum, iron, and manganese discharged from the Drew Tunnel. The range is based on undisturbed water samples and estimated flow rates of 450,000-650,000 gpd from the Drew Tunnel. The estimated metals discharged from the Drew Tunnel range from 1.6-3.98 pounds per day for aluminum, approximately 24.7-102.3 pounds per day for iron, and approximately 5.5-14.52 pounds per day for manganese. On 3 September 2003, Newmont submitted analysis of chemistry data for the Drew Tunnel discharge from seven sampling events collected by the City between April 2000 and January 2001 (*Initial Evaluation of Treatment Options for the Mine Adit Discharge at the City of Grass Valley Wastewater Treatment Plant*). Newmont's summary of the average concentrations measured in the Drew Tunnel discharge is shown below, and is compared to the City's discharge limits in its NPDES permit.

Average Constituent Concentrations and Estimated Loading from the Drew Tunnel Compared to the WWTP's NPDES Monthly Discharge Limits

Metal	Average Concentration Measured in Drew Tunnel Discharge (µg/L)	NPDES Permit Average Monthly Concentration Limit (µg/L)	Average Load Estimated from Drew Tunnel (lbs/day)	NPDES Permit Average Monthly Load Limit (lbs/day)
Aluminum (total)	153	71	1.6	0.7
Aluminum (dissolved)	29	---	0.13	---
Copper (total)	4.9	8.9	0.02	0.21
Iron (total)	5,100	300	24.7	7
Lead (total)	0.89	1.4	0.004	0.032
Manganese (total)	1,150	50	5.5	1
Mercury (total)	0.058	0.05	0.0012	0.0003
Zinc	18	110	0.09	2.6

Based on their analysis, Newmont concluded that only aluminum, iron and manganese should be considered in the treatment evaluation for the Drew Tunnel discharge.

36. In April 2006, Newmont re-examined the constituents needing treatment and investigated the effectiveness of various treatment technologies for removal of aluminum, copper, iron, manganese and zinc from the Drew Tunnel discharge (*Pilot-Scale Treatability Test Results of the Drew Portal Water, City of Grass Valley, Wastewater Treatment Plant Property*). This report was based on approximately one-year of baseline water chemistry and flow characterization from the Drew Tunnel discharge between January and December 2005. A summary of the average baseline water chemistry concentrations measured in the Drew Tunnel discharge is shown below.

Constituent concentrations in Drew Tunnel discharge and NPDES limits

DATE	Aluminum	Copper	Iron	Lead	Manganese	Mercury	Zinc
	µg/l	µg/l	µg/l	µg/l	µg/l	ng/l	µg/l
1/28/05	<30	<5	5540	<0.1	1250	0.3	9
2/10/05	90	8	4510	<0.1	1250	<0.2	9
2/23/05	30	<1	5070	<0.1	1320	0.5	8
3/09/05	60	<5	4890	1.0	1290	0.4	30
3/23/05	170	12.5	14100	0.1	1230	1.5	<20
4/06/05	90	2	3580	0.3	1190	0.9	13
5/03/05	110	2.2	3660	4.0	1080	1.2	12
7/06/05	40	1.6	3080	<0.1	1090	0.5	2
8/03/05	130	6.3	2960	<0.1	1080	0.6	4
9/07/05	110	<5	3510	<1.0	1000	0.7	<20
Average	90	4	5090	0.6	1180	0.7	10
Limits*	87	1.3	300	0.21	50	50	15

Note: Constituent averages in bold indicate concentrations above the current WDR limits.

* NPDES average monthly effluent limitations for WWTP as of 1 March 2008. Limits for copper, lead, and zinc are hardness dependent and the values shown are based on a hardness of 13 mg/l.

37. Sample data contained in the reports listed above and summarized in the above Findings suggests that the Drew Tunnel discharge is a significant source of aluminum, copper, iron and manganese loading to the City's WWTP. Source removal and/or isolation of these metals in the Drew Tunnel discharge would reduce the concentrations of aluminum, copper, iron and manganese in the City's WWTP effluent and would aid in meeting WWTP effluent limitations for these constituents.
38. Background groundwater data is not currently available for the site. A comparison of water in the mine workings to surrounding supply wells is needed in order to determine if there are any impacts to groundwater from the Drew Tunnel discharge.

BENEFICIAL USES

39. The Regional Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses of the waters of the state, establishes Water Quality Objectives (WQOs) to protect these uses, and establishes implementation policies to achieve WQOs.
40. Wolf Creek flows into the Bear River, which is tributary to Camp Far West Reservoir, thence to the Feather River, and thence to the Sacramento River.
41. The designated beneficial uses for Wolf Creek and the Bear River as specified in the Basin Plan are municipal and domestic supply, agricultural supply, hydropower generation, water contact recreation, non-contact water recreation, warm fresh water

habitat, cold freshwater habitat, migration of aquatic organisms (potential), spawning, reproduction, and/or early development (potential) and wildlife habitat.

42. Designated beneficial uses of groundwater at the site are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

AUTHORITY AND LEGAL REQUIREMENTS

43. The State Water Resources Control Board (hereafter State Water Board) has adopted Resolution No. 92-49, the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*. This Resolution sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that cleanup levels be consistent with State Water Board Resolution No. 68-16, the *Statement of Policy With Respect to Maintaining High Quality of Waters in California*. Resolution No. 92-49 and the Basin Plan establish cleanup levels to be achieved. Resolution No. 92-49 requires waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with Section 2550.4 of Title 23 California Code of Regulations (CCR). Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board.
44. Chapter IV of the Basin Plan contains the *Policy for Investigation and Cleanup of Contaminated Sites*, which describes the Regional Water Board's policy for managing contaminated sites. This policy is based on California Water Code Sections 13000 and 13304, Chapter 15 of Division 3 of Title 23 CCR, and Subdivision 1 of Division 2 of Title 27 CCR, and State Water Board Resolution Nos. 68-16 and 92-49. The policy addresses site investigation, source removal or containment, information required to be submitted for consideration in establishing cleanup levels, and the basis for establishment of soil and groundwater cleanup levels.
45. The State Water Board's *Water Quality Enforcement Policy* states in part: "At a minimum, cleanup levels must be sufficiently stringent to fully support beneficial uses, unless the Regional Water Board allows a containment zone. In the interim, and if restoration of background water quality cannot be achieved, the Order should require the discharger(s) to abate the effects of the discharge. Abatement activities may include the provision of alternate water supplies." (Water Quality Enforcement Policy, p.19)

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46. California Water Code Section 13304, subdivision (a) provides that:
“Any person who has discharged or discharges waste into waters of the state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each affected public water supplier or private well owner. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”
47. California Water Code Section 13267, subdivision (b) provides that:
“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

The technical reports required by this Order are necessary to assure compliance with California Water Code Section 13304. Existing information about the site indicates that waste has been discharged or is discharging from the Drew Tunnel where the Discharger named in this Order is responsible as described in Finding 3.

48. California Water Code Section 13304, subdivision(c)(1) provides that:
“ . . . the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that government agency to the extent of the reasonable

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costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial actions.”

49. The Discharger has a duty to apply for an NPDES permit, i.e., submit a complete application, in accordance with 40 CFR 122.21 because it discharges pollutants to navigable waters. Furthermore, the Discharger is required to submit an application for waste discharge requirements in accordance with the California Water Code Section 13260 because it discharges wastes that affect waters of the state. The Discharger has not complied with either provision of law.
50. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), pursuant to the Section 15321, subdivision (a)(2) of Title 14 CCR. The implementation of this Order is also an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), in accordance with Sections 15308 and 15330 of Title 14 CCR. The actions required by this Order do not have the potential to cause a significant effect on the environment and is, therefore, exempt from CEQA pursuant to Section 15061(b)(3) of Title 14 CCR.
51. Any person affected by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Title 23 CCR Sections 2050-2068. The regulations may be provided upon request and are available at www.waterboards.ca.gov. The State Water Board must receive the petition within 30 days of the date of this Order.

REQUIRED ACTIONS

IT IS HEREBY ORDERED that, pursuant to California Water Code section 13304 and California Water Code section 13267, Newmont USA Limited shall:

Investigate and cleanup waste and abate the effects of the discharge of waste, forthwith, at the Drew Tunnel in conformance with State Water Board Resolution No. 92-49 *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* and with the Regional Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (in particular the Policies and Plans listed within the Control Action Considerations portion of Chapter IV). "Forthwith" means as soon as is reasonably possible. Compliance with this requirement shall include, but not be limited to, completing the tasks listed below.

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PUBLIC PARTICIPATION PLAN

1. **By 15 June 2007**, the Discharger shall submit and immediately implement a *Public Participation Plan*. The *Public Participation Plan* shall include, but not be limited to, a baseline community survey of potential stakeholders (adjacent property owners, citizen groups, State, County and local agencies, etc.) to determine the level of public interest, and stakeholders' desire for involvement in the investigation and cleanup activities at the Drew Tunnel. The *Public Participation Plan* shall solicit stakeholders' concerns and address the dissemination of information to all interested parties regarding the cleanup activities at the Drew Tunnel, and include a mechanism for public input on each of the technical reports required by this Order. The *Public Participation Plan* shall be updated as necessary to reflect any significant changes in the degree of interest as the site investigation and cleanup process moves towards completion. The Discharger must inform and coordinate with the City of Grass Valley at every phase of this Order.

SOURCE CONTROL AND WATER MANAGEMENT

2. **By 1 July 2007**, the Discharger shall submit a *Source Control and Water Management Workplan* (hereafter Workplan) to investigate the nature and extent of the factors contributing to the Drew Tunnel discharge. The Workplan shall include the following:
 - a. A site description the Drew Tunnel and its associated mine workings and discharge area, a summary of previous investigations and existing data, a conceptual site model, and an identification of data gaps.
 - b. A plan to investigate the source(s) of water and pollutants in the discharge and the extent of the area contributing to the discharge. This plan should include maps and cross-sections based on available information showing the lateral and vertical extent of the mine workings including all known or suspected drainage tunnels. The plan must consider field characterization of surface hydrogeologic features that could allow surface water to enter the mine workings. The plan must consider provisions to obtain continuous water level measurements of the main body of the mine workings drained by the Drew Tunnel.
 - c. A plan to compare water in the mine and in the tunnel discharge to groundwater not affected by mine waste.
 - d. A description of potential water management alternatives and a plan to investigate any remaining data gaps for selection of a remedy for the Drew Tunnel discharge. The alternatives should consider both source control of water and/or pollutants, and treatment of the discharge, such as reducing surface water entering the mine workings, plugging the tunnel, and treatment or pre-treatment in combination with discharge to the City of Grass Valley WWTP. This analysis should identify any data gaps remaining for the design and construction

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of identified potential source control methods and treatment systems. The workplan shall propose any work needed to obtain the necessary data.

- e. A time schedule for conducting the proposed work and submitting the Source Control and Water Management Report required in part 3, below, on or before 31 January 2008.

The Workplan shall be implemented in accordance with the approved time schedule. Implementation may be phased. After Regional Water Board staff approval of the time schedule, it shall become an enforceable part of this Order.

3. **By 31 January 2008**, the Discharger shall submit a *Source Control and Water Management Report* (hereafter Report) in accordance with the time schedule in the approved Workplan, including the following:
 - a. A narrative summary of the results of the approved Workplan, including field investigations and water management studies.
 - b. A description of all areas or features identified as sources and/or potential sources of water and pollutants in the Drew Tunnel discharge, including maps and cross-sections showing the lateral and vertical extent and locations of sources of water and pollutants and their individual estimated relative contribution.
 - c. All data and laboratory results and tabular and/or graphical summaries of the results.
4. Within **60 days** of Regional Water Board staff concurrence with the Report, the Discharger shall submit a *Feasibility Study Report* (hereafter FS Report). The FS Report shall revise (where appropriate) existing reports (Finding #'s 21, 22, 23, 25, 27, 29, 30, and 31) to include new data. The report shall assess the feasibility and effectiveness of potential alternatives including source control, source removal, and/or treatment and removal of pollutants from the Drew Tunnel discharge. The FS Report shall have sufficient detail to provide the basis for decisions regarding subsequent response actions.
5. Within **30 days** of Regional Water Board staff concurrence with the FS Report, the Discharger shall submit a *Draft Remedial Action Plan* (hereafter Draft RAP). The Draft RAP shall describe the preferred alternative for source control, source removal and/or treatment and removal of pollutants discharged from the Drew Tunnel, including a detailed implementation plan and proposed time schedule. The Draft RAP shall include any necessary written agreements for access to implement the Draft RAP. The plan and proposed time schedule shall include sufficient time for compliance with CEQA and any required permits, including an NPDES permit if necessary.

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6. Within **15 days** of Regional Water Board staff concurrence with the Draft RAP, the Discharger shall submit a *Final Remedial Action Plan* (hereafter Final RAP). The Final RAP shall incorporate and address any Regional Water Board staff comments on the Draft RAP and shall include a final time schedule for implementation of the remedial activities.

PROGRESS REPORTS

7. Beginning with the third quarter of 2007, the Discharger shall submit Quarterly Progress Reports. These reports shall describe all work completed during the calendar quarter to comply with this Order; and any new, modified, or renovated component of the source control, source removal and/or treatment of the Drew Tunnel discharge. These reports shall be submitted by the 15th day of the month following the quarter for which the report is prepared (e.g., the third quarterly report is due by 15 October each year).

GENERAL REQUIREMENTS

In addition to the above, the Discharger shall:

8. Reimburse the Regional Water Board for reasonable costs associated with oversight of the investigation and remediation of the site. Within **30 days** of the effective date of this Order, the Discharger shall provide the name and address where the invoices shall be sent. Failure to provide a name and address for invoices and/or failure to reimburse the Regional Water Board's oversight costs shall be considered a violation of this Order.
9. Conduct work only after Regional Water Board staff concurs with workplans.
10. Submit all reports with a cover letter signed by the Discharger.
11. Fourteen days prior to conducting any fieldwork, submit a Health and Safety Plan that is adequate to ensure worker and public safety during the field activities in accordance with Section 5192 of Title 8 CCR.
12. Notify Regional Water Board staff at least three working days prior to any onsite work, testing, or sampling that pertains to environmental remediation and investigation and is not routine monitoring, maintenance, or inspection.
13. Obtain all local and state permits and access agreements necessary to fulfill the requirements of this Order prior to beginning work.
14. Continue any remediation or monitoring activities until such time as the Executive Officer determines that sufficient cleanup has been accomplished to fully comply with this Order and this Order has been rescinded.

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As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all technical reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed/stamped by the registered professional. All technical reports submitted by the Dischargers shall include a statement signed by the authorized representative certifying under penalty of law that the representative has examined and is familiar with the report and that to their knowledge, the report is true, complete, and accurate.

In addition to the above, the Discharger shall comply with all applicable provisions of the California Water Code that are not specifically referred to in this Order.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order may result in the assessment of Administrative Civil Liability of \$1,000 to \$10,000 per day of violation, depending on the violation, pursuant to the California Water Code, including sections 13268, 13350 and 13385. The Regional Water Board reserves its right to take any enforcement actions authorized by law.

This Order is effective upon the date of signature.

PAMELA C. CREEDON, Executive Officer

(Date)

Attachments: A - Location Map
B - Site Map

JSH/WLB: 5/1/2007

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